

METHOD AND SYSTEM FOR REGISTERING PRE-PRODUCED WEBS  
WITH VARIABLE PITCH LENGTH

**ABSTRACT**

5        A new machine control method and system for registering pre-produced webs into a  
converting line producing disposable absorbent articles such as diapers, pull-ups, feminine  
hygiene articles or a component thereof. The pre-produced webs can include a multiplicity of  
pre-produced objects spaced on the web at a pitch interval in the web direction. The pre-produced  
web being manipulated in order for the pre-produced object of the web to be registered in relation  
10    to a target position. The present invention includes five embodiments, where the first  
embodiment is expressed as a generic claim. The first embodiment includes a closed-loop  
feedback registration system; the second and third embodiments, in addition, include an open-  
loop feedforward control system; the fourth and fifth embodiments, in addition, include an  
automatic phasing system. In addition, the third embodiment uses a machine vision system to  
15    recognize any element of a complex pre-produced object (e.g., colorful graphics).